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AUTHOR Thorlacius, Jcn
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ABSTRACT

This study examined changes in behavicr as a result of intensive workshop activity that trained supervisers tc apply clinical supervision skills in their supervision of student teachers. Workshops in clinical supervision attempt to foster a "freeing," less "direct" approach in supervisory behavior by establishirg a collegial rather than hierarchical atmosphere during conferences. In this study, the supervisors were classroom teachers working with student teachers from a local university. Conferences between the supervising teachers and the student teachers were videotaped, and the behaviors of both participants were coded accerding to categories identified by the Supervisor-Teacher Analogous Categories Systems (STACS): (1) behaves in a supportive manner: (2) accepts or uses the other's ideas: (3) solicits information: (4) solicits opinicn cr suggestion: (5) provides solicited information: (6) provides solicited cpinion or suggestion: (7) provides unsolicited information: (8) provides unsolicited opinion or suggestion: (9) behaves in a nonsupportive manner: (10) is silent or confused. Comparisons of supervisory behaviors before and after the workshop indicated that highly significant changes occurred in a majority of the categories. Changes were in the direction predicted by the use of the clinical supervision model, in that supportive behavior increased in both supervisors and student teachers. (Author/FG)

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CHANGES IN SUPERVISORY BEHAVIOR RESULTING FROM TRAINING IN CLINICAL SUPERVISION

Dr. Jon Thorlacius
THE UNIVERSITY OF LETHBRIDGE
LETHBRIDGE, Alberta, Canada T1K 3M4

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ABSTRACT

This study examined the changes that occur in supervisor behavior as a result of intensive workshop activity designed to train supervisors in the skills necessary for applying the Clinical Supervision process to the supervision of classroom teaching. Results indicated highly significant changes in supervisory behavior in a majority of categories identified by the Supervisor- Teacher Analogous Categories Systems (STACS) which was used to code before and after workshop behavior. Changes were in the direction predicted by the use of the Clinical Supervision model.

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TABLE OF CONTENTS

	Page
ABSTRACT	ii
ACKNOWLEDGEMENTS	iii
LIST OF TABLES	v
LIST OF FIGURES	vii
INTRODUCTION	1
REVIEW OF LITERATURE	3
PURPOSE AND OBJECTIVES	10
METHODOLOGY	11
THE SAMPLE	11
DATA COLLECTION	11
DATA ANALYSIS	14
LIMITATIONS	14
RESULTS	15
SUPERVISOR BEHAVIOR	15
TEACHER BEHAVIOR	17
GENERAL TRENDS	18
DISCUSSION	33
SUGGESTIONS FOR FURTHER RESEARCH	38
REFERENCES	40
APPENDIX A	41

LIST OF TABLES

Table		Page
1.	STACS Category 1: Duration of 'Supervisor Supportive Behavior' Analysis of Variance by Pre- and Post-Test	19
2.	STACS Category 11: Duration of 'Teacher Supportive Behavior' Analysis of Variance by Pre- and Post-Test	19
3.	STACS Category 2: Duration of 'Supervisor Accepts Other's Ideas' Analysis of Variance by Pre- and Post-Test	20
4.	STACS Category 12: Duration of 'Teacher Accepts and Uses Other's Ideas' Analysis of Variance by Pre- and Post-Test	20
5.	STACS Category 3: Duration of 'Supervisor Solicits Information' Analysis of Variance by Pre- and Post-Test	21
6.	STACS Category 13: Duration of 'Teacher Solicits Information' Analysis of Variance by Pre- and Post-Test	21
7.	STACS Category 4: Duration of 'Supervisor Solicits Opinion or Suggestions' Analysis of Variance by Pre- and Post-Test	22
8.	STACS Category 14: Duration of 'Teacher Solicits Opinion or Suggestions' Analysis of Variance by Pre- and Post-Test	22
9.	STACS Category 5: Duration of 'Supervior Provides Solicited I formation' Analysis of Variance by Pre- and Post-Test	23
10.	STACS Category 15: Duration of 'Teacher Provides Solicited Information' Analysis of Variance by Pre- and Post-Test	23
11.	STACS Category 6: Duration of 'Supervisor Provides Solicited Opinion or Suggestion' Analysis of Variance by Pre- and Post-Test	24

12. STACS Category 16: Duration of 'Teacher Provides Solicited Opinion or Suggestion' Analysis of Variance by Pre- and Post-Test 24

13. STACS Category 7: Duration of 'Supervisor Provides Unsolicited Information' Analysis of Variance by Pre- and Post-Test 25

14. STACS Category 17: Duration of 'Teacher Provides Unsolicited Information' Analysis of Variance by Pre- and Post-Test 25

15. STACS Category 8: Duration of 'Supervior Provides Unsolicited Opinion or Suggestions' Analysis of Variance by Pre- and Post Test 26

16. STACS Category 18: Duration of 'Teacher Provides Unsolicited Opinion or Suggestions' Analysis of Variance by Pre- and Post-Test 26

17. STACS Category 9: Duration of 'Supervior Non-Supportive Behavior' Analysis of Variance by Pre- and Post-Test 27

18. STACS Category 19: Duration of 'Teacher Non-Supportive Behavior' Analysis of Variance by Pre- and Post-Test 27

19. A Comparison of Total Time Utilized in Supervisory Conferences Analysis of Variance by Pre- and Post-Test 28

LIST OF FIGURES

Figure		Page
1	Sequence of Initial Interview Supervisor: 101 Teacher: 101	29
2	Sequence of Final Interview Supervisor: 101 Teacher: 101	30
3	Sequence of Initial Interview Supervisor: 104 Teacher: 104	31
4	Sequence of Initial Interview Supervisor: 104 Teacher: 104	32

CHANGES IN SUPERVISORY BEHAVIOR RESULTING FROM TRAINING IN CLINICAL SUPERVISION

INTRODUCTION

For several years the writer has been involved in workshop activity designed to train supervising teachers and school administrators in the use of the Clinical Supervision model for the supervision of student teachers. This model was developed initially by Morris Cogan and his associates at Harvard and is based on the assumption that greater benefits accrue to both the supervisor and the student teacher when the supervisory conference is conducted in a collegial, rather than an heirarchical manner (see Cogan, 1973).

One of the requirements of Clinical Supervision workshops has been the preparation by each participant of a videotape of a supervisory conference which demonstrates the supervisory behavior of each participant prior to training. Thus each workshop participant has a videotape of his own performance as a supervisor conducting a conference with a student teacher whose lesson has just been observed. This videotape serves as baseline data for comparison later in the workshop when the participant prepares subsequent

videotapes which demonstrate changes in supervisory behavior as a result of training in techniques of applying the Clinical Supervision model.

One of the problems encountered by the writer and his colleagues when attempting to provide feedback to participants was our own lack of skill in providing good objective data regarding the participants' specific behaviors as supervisors. We found ourselves reacting to videotape playbacks with the typical visceral reactions and the value judgments which were precisely the kinds of behaviors we were attempting to change in the participants' supervisory styles.

In 1977 the writer developed a system, now known as STACS[1], for analyzing and coding supervisory conferences (Thorlacius, 1978). Since that time workshop participants have been taught to use the system to code their own supervisory conferences and to compare later videotapes with their original baseline videotapes. It became apparent to the writer that most participants changed their supervisory styles as a result of the workshop experience. Therefore

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[1] STACS is an acronym for Supervisor-Teacher Analogous Categories System. See Appendix A for a description of STACS.

this research project was conceived to study the kinds of changes that occurred and to examine the extent to which significance could be attached to those changes.

REVIEW OF LITERATURE

As pointed out by both Weller (1971) and Blumberg (1974), research on the effects and process of supervision is virtually nonexistent. While Weller's M.O.S.A.I.C.S. instrument is excellent as a research tool and yields a most comprehensive and multidimensional analysis of pedagogical, substantive and logical factors in supervision, by Weller's own admission, it neglects the affective or social-emotional aspect of supervision which might, he suggests, "in the last analysis be the most crucial factors" (Weller, 1971, p.141).

Blumberg and Amidon (1974) did examine behavior styles of supervisors and factors that both superviors and teachers see as affecting their productivity. The results of their research give the best insight to date into the interpersonal dynamics of supervisory conferences which seem to have a bearing on productivity as seen by teachers. For those not familiar with the categorizations of supervisory style conceptualized by Blumberg and Amidon they are as follows:

Style A. High Direct, High Indirect
The teacher sees the supervisor emphasizing both direct and indirect behavior: he tells and criticizes but he also asks and listens.

Style B. High Direct, Low Indirect
The teacher perceives the supervisor as doing a great deal of telling and criticizing but very little asking or listening.

Style C. Low Direct, High Indirect
The supervisor's behavior is rarely direct (telling, criticizing, and so forth); instead he puts a lot of emphasis on asking questions, listening, and reflecting the teacher's ideas and feelings.

Style D. Low Direct, Low Indirect
The teacher sees the supervisor as passive, not doing much of anything (pp.45-46).

Blumberg and Amidon arrived at the following major conclusions:

1. High indirect supervisory behavior, whether combined with high direct behavior or not, is related to evaluations of greater conference productivity.

2. High indirect combined with high direct supervisory behavior is related to learning about one's self both as a teacher and as a person.

3. Freedom of communication in the conference appeared to be curtailed only when the supervisor exhibited a combination of high direct and low indirect behavior.

4. The discrepancy between perceived and wished-for supervisory behavior was greatest for supervisors who de-emphasized indirect behavior (1965, pp.2,3).

Blumberg subsequently developed his own system for analyzing supervisor-teacher interaction and although the

writer found it to be most helpful at first it did not seem to yield precisely the kind of data being sought. Perhaps this was so because Blumberg did not design his system specifically for use with the Clinical Supervision model. His system examines the supervisor's verbal behavior but it does not provide much information on the behavior of the supervisee. Since clinical supervision places a high value on the active participation of both supervisor and supervisee it is important to examine comparable parameters of each participant's interaction and to possibly deduce some effects of this interaction on each of the participants.

Blumberg's system utilizes 15 categories of which 10 are devoted to the supervisor, four to the teacher and one to silence or confusion. This emphasis on supervisory behavior was deliberate on his part since he sees the supervisor as the one person who, in the supervisor-teacher relationship, has more influence and control and hence he sought to include in his analysis system a sharper delineation of the behavior of the supervisor (Blumberg, 1974, p.92).

The writer differs with Blumberg in that, attempting to achieve what Cogan sees as a "collegial relationship" between supervisor and teacher, one would tend to ascribe

less influence and control to the supervisor than does Blumberg, if the writer interprets him correctly. At the same time one would encourage a relationship which brings the teacher's own influence and control more into ascendency as the relationship between the supervisor and teacher grows until the two enjoy a working relationship which is best described as colleagueship.

Cogan, in describing the relationship between teacher and clinical supervisor, writes:

> This relationship between teacher and clinical supervisor is maintained in force as long as they can work together productively as colleagues. It deteriorates significantly or ceases to exist when either assumes an ascendent role or is accorded an ascendent role by the other. This delicate balance in working together as equals does not imply that teacher and supervisor have similar and equal professional competences. On the contrary, they commonly have dissimilar and unequal competences. This heterogeneity is nurtured in their association and constitutes one of its principal strengths. In clinical supervision the interaction of similar competences at equal levels is generally less productive than the interaction of unequal levels of competence and dissimilar competences. Such productive heterogeneity may be observed when the clinical supervisor, highly competent in observation, works with a teacher who is more competent in knowledge of the curriculum, his students, their learning characteristics and transient and persistent problems, and the school sub-societies to which they belong (p.68).

Rogers suggests that the quality of the interpersonal relationship determines the extent to which an experience

releases or promotes growth and development (1962, p.416). In determining the attitudinal elements which make a relationship a growth-producing climate, Rogers identified several conditions: congruence, empathy, positive regard, unconditionality of regard, and the person's perceptions of these factors. The presence or absence of these qualities determines the quality of the interpersonal relationship and therefore the extent to which a growth-producing climate is produced.

Rogers frequently refers to trust when describing a relationship which creates a growth-producing climate. It is part of what he describes at being "congruent" (in Avila, Combs and Purkey, 1971, p.413). Because trust is so important in the relationship between supervisor and teacher, a major concern is to be able to gather data which provides some evidence of the degree to which a good trust relationship either does or does not exist in the conference situation. It is important to remember that in the supervisor-teacher relationship the effect any response has depends largely upon the degree of trust in the relationship. The higher the level of trust, the greater the variety of responses which can be used without producing a binding effect. Since supervisors should be conducting themselves in a manner which would hopefully produce more

freeing than binding effects our analysis system should provide us with some measure of the relative amounts of freeing-type behavior and of binding-type behavior.

In order to free the other person one must gain an increased understanding of him and convey this to him verbally and non-verbally. A person needs to know how to listen, paraphrase and check perceptions. He must also be able to help the other person understand him in turn, which means he can describe behavior and events objectively and can report his feelings openly and directly.

Conversely, binding kinds of responses diminish the other person's autonomy by making him feel controlled. Explaining or interpreting the other's behavior in some way has binding effects as does giving advice or trying to persuade the other person. Levelling expectations also tend to bind the other person to a prescribed level of performance. Similarly, denying the other person's feelings, giving approval or disapproval on personal grounds, or lavishing praise without identifying the specific behavior being rewarded, can all result in very binding kinds of effects.

A critical determinant of the effectiveness of the supervisory conference, relates to the degree of directness

or indirectness of the supervisory style. As pointed out earlier, Blumberg's research indicates a teacher preference for emphasis on a highly indirect approach on the part of the supervisor. Whether combined with direct supervisory behavior or not the indirect approach (putting emphasis on asking questions, listening and reflecting back the teacher's ideas and feelings) would seem to be perceived by teachers as being more productive than a highly direct approach of telling and criticizing with very little asking or listening involved.

It should be noted that much of the behavior identified in Blumberg's "indirect" and "direct" categorizations is similar to that earlier identified as "freeing" or "binding" behaviors respectively. It is easy to comprehend teacher preference for the indirect style when one considers the effects these behaviors have on the recipient.

PURPOSE AND OBJECTIVES

The premise underlying the Clinical Supervision workshop is that supervisory behavior will change as a result of training, toward a more "freeing", less "direct" approach. Therefore the major purpose of this study was to examine the changes that occured in supervisory behavior as

a result of training in Clinical Supervision. Specific objectives were to examine how supervisory behavior changed in each category of STACS and whether there was an over-all increase or decrease in each behavior. Another objective was to compare the changes in supervisory behavior with the changes that occurred in teacher behavior in an attempt to draw some inferences about how the one affected the other.

METHODOLOGY

Over the course of four or five years of conducting workshops on Clinical Supervision the writer has collected, with the consent of the participants, a number of videotapes of initial supervisory conferences (which will be referred to as baseline conferences) and, for the same participants, videotapes of conferences conducted at the conclusion of the workshop (which will be referred to as final conferences). During the course of each workshop the participants actually produced two or three videotapes as they practised their skills of supervision and conferencing. Only the pre-training (baseline) videotapes and the final videotapes were used in this research project.

The Sample

Thirty-five supervisor-supervisee dyads were chosen for the sample on the basis of clarity of both baseline and final videotapes and willingness of participants to have their videotapes analyzed for the purposes of the research project. Fourteen supervisors were female and 21 were male.

Supervisors were, for the most part, classroom teachers who were working with student teachers from The University of Lethbridge. Three of the supervisors were school principals who were taking the workshop either because they had a student assigned to them or because they wanted to improve their supervision skills for working with their teachers. Where a supervisor did not have a student teacher to supervise he was supervising a teacher on staff who agreed to participate in the videotaping for the workshop.

Data Collection

New technology in the form of a computerized Timed Interval Categorical Observation Recorder (TICOR) developed by Dr. Rex Wadham at Brigham Young University made it possible to improve on the system of coding originally used with STACS.[2] TICOR is a system for collecting and analyzing

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[2] A complete description of the coding system originally used is given in the article cited earlier (Thorlacius, 1978).

observational data. The system consists of several hardware components and software programs which enable an observer to record events either directly as they occur, or from videotape, according to a pre-determined code, and to later analyze this information. The fact that the codes utilized during the observation are user-defined demonstrates the versatility of TICOR, whose entire function may be altered for different purposes.

The face of the unit contains a number of keys on both the left and right-hand side of the unit. Keys can be labelled according to the coding system being used and certain keys can be defined as primary and secondary modifiers. This enables the user to depress a primary key indicating, for example, supervisor behavior and, while that key is held down it is possible, by pushing a secondary modifier key, to record what category of supervisor behavior is being coded. A similar and simultaneous function is available for teacher behavior so that one can record either simultaneously or separately, each category of supervisor and teacher behavior. While each primary key (supervisor or teacher) is held down it records the duration, in seconds, of that behavior. When the key is released TICOR automatically terminates that string of data and awaits the depressing of the next primary key with its modifier. If,

for example, supervisor behavior changes from one category to another one must release the primary key and press it again with a new modifier; similarly for teacher behavior. The beauty of this system is that simultaneous behavior, if it occurs, can be recorded separately. The added advantage of this system is that one can record actual duration of time, in seconds (to one-tenth of a second) of each category of behavior, and because the data can be fed directly to the computer for analysis, the analysis becomes much more accurate and is time-efficient.

A research assistant was trained in the use of TICOR until she was totally familiar with its use. Considerable skill is required to watch a videotape and simultaneously depress the proper keys to accurately code the behavior. Also, the research assistant was required to learn to use the STACS appropriately. Since she had been a former member of a workshop in which she was taught to use STACS to analyze her own videotapes this did not require much time. For the purposes of this research project, however, the research assistant was required to achieve an inter-rater reliability with the researcher of .75 or better on the coding of three videotapes.

Data Analysis

After the 35 baseline and final videotapes for each supervisor were coded, the data were sent to the computer for analysis. Using programs developed for the STACS analysis, the print-outs were obtained of each baseline and final conference for each supervisor- teacher dyad. These print-outs showed duration of time (to one-tenth of a second) devoted to each category of behavior as identified by the STACS instrument. Data from all 35 supervisors and teachers were then pooled to yield a total duration time on each category of behavior. These time durations were then subjected to analysis of variance of category by what is referred to in the tables as pre- and post-tests. Since data were in the form of ratio data, analysis of variance was deemed to be an appropriate statistic.

Limitations

According to Ober, any observational system, to be useful, has to be descriptive, objective, in the form of a skill which can be mastered with minimum effort and training time, and manageable and useful to the practitioner as well as to the researcher or theoretician (Ober, Bentley and Miller, 1971, p.36). STACS is not as objective as one might prefer, since categories are not in some cases clearly

mutually exclusive. Users of the system need to understand distinctions, for example, between "information" and "opinion". Similarly, distinctions between "supportive behavior" and "accepting and using other's ideas" need to be clearly understood by the user. Insofar as the user of STACS is not consistent in categorizing behaviors appropriately, errors may occur. In this study the inter-rater reliability established should satisfy concerns as to consistency of coding.

Similarly, with the use of TICOR one's manual dexterity and reaction time may affect the analysis. Again, the inter-rater reliability established over the use of both STACS and TICOR indicate the level of confidence which may be placed in the results.

RESULTS

Tables 1-18 show the results of an analysis of variance test comparing the duration of time devoted by the pooled groups of supervisors or teachers before and after training (N=35 in each case). Mean duration in seconds per conference is also shown for each category of supervisor behavior and teacher behavior included in the STACS instrument.

Supervisor Behavior

Tables 1, 3, 5, 7, 9, 11, 13, 15 and 17 show changes in supervisor behavior. In six of the nine categories of behavior the change is significant beyond the .05 level. In Category 2 (Table 3), 'Supervisor Accepts or Uses the Other's Ideas' there is an increase in this behavior on the part of supervisors from an average of 3.4 seconds per conference to an average of 11.9 seconds per conference (p=.000). Category 4 (Table 7), 'Supervisor Solicits Opinions or Suggestions' shows an average increase from 9.2 seconds in the baseline conferences to 19 seconds in the final or post-training conferences (p=.007). Category 5 (Table 9), 'Supervisor Provides Solicited Information' shows the greatest shift in supervisor behavior, from an average of 0.26 seconds in pre-training or baseline conferences to an average of 143 seconds (approximately 2.38 minutes per conference) in the post-training conferences (p=.000). Category 7 (Table 13), 'Supervisor Provides Unsolicited Information' shows another dramatic shift in supervisor behavior in that there is a a decrease in this behavior from an average of 48.4 seconds to 18 seconds per conference (p=.000).

Another highly significant change occurs in Category 8 (Table 15), 'Supervisor Provides Unsolicited Opinion or

Suggestions'. There is a reduction in the amount of unsolicited opinion from an average of 85 seconds down to 26 seconds (p=.000). The other category which shows a highly significant change in supervisor behavior from pre- to post-training conferences is in the area of 'Supervisor Non-Supportive Behavior' (Table 17). The change here is from an average of 4.5 seconds in pre-training conferences to total elimination of the behavior after training (p=.000).

Teacher Behavior

Tables 2, 4, 6, 8, 10, 12, 14, 16 and 18 show changes in teacher behavior between pre-training conferences and post-training conferences. Four of the nine categories of teacher behavior show a significant change beyond the .05 level.

Category 12 (Table 4), 'Teacher Accepts or Uses the Other's Ideas' shows an increase from an average of 2.4 seconds to an average of 5.7 seconds per conference (p=.007). Category 13 (Table 6), 'Teacher Solicits Information' shows an increase from 0.25 to 4.3 seconds on the average per conference (p=.026). Category 16 (Table 12), 'Teacher Provides Solicited Opinions or Suggestions' shows almost a three-fold increase from 33.2 seconds to 95.4

seconds on the average (p=.000). Category 18 (Table 16), 'Teacher Provides Unsolicited Opinion or Suggestions' shows also nearly a three-fold increase from 22.4 seconds to 64.7 seconds on the average (p=.002).

General Trends

Table 19, which shows a comparison of total time utilized in supervisory conferences shows a two-fold increase in the duration of time spent on the conference from roughly five minutes on the average in the pre-training conferences to ten minutes in the post-training conference (significant at the 0.000 level).

Figures 1 to 4 provide a graphic illustration of the sequence of a couple of initial and final conferences so that the reader can get a feeling for the sequence and duration of activity that occurs. (Supervisor and teacher numbers should be interpreted as numbers 1 and 4 in the sample. The designation 101 and 104 were for computer purposes).

TABLE 1

STACS Category 1:
Duration of 'Supervisor Supportive Behavior'
Analysis of Variance by Pre- and Post-Test

Source	df	Sum of Squares	Mean Squares	F-Ratio	p
Between Groups	1	2.16	2.16	0.099	0.754
Within Groups	68	1489.58	21.90		
Total	69	1491.75			

Mean duration per Conference:
Pre-Test 3.14 seconds; Post-Test 2.79 seconds

TABLE 2

STACS Category 11:
Duration of 'Teacher Supportive Behavior'
Analysis of Variance by Pre- and Post-Test

Source	df	Sum of Squares	Mean Squares	F-Ratio	p
Between Groups	1	42.59	42.59	1.194	0.278
Within Groups	68	2425.57	35.67		
Total	69	2468.15			

Mean duration per Conference:
Pre-Test 1.37 seconds; Post-Test 2.93 seconds

TABLE 3

STACS Category 2:
Duration of 'Supervisor Accepts or Uses the Other's Ideas'
Analysis of Variance by Pre- and Post-Test

Source	df	Sum of Squares	Mean Squares	F-Ratio	p
Between Groups	1	1198.12	1198.12	14.558	0.000
Within Groups	68	5596.49	82.30		
Total	69	6794.60			

Mean duration per Conference:
Pre-Test 3.65 seconds; Post-Test 11.92 seconds

TABLE 4

STACS Category 12:
Duration of 'Teacher Accepts or used the Other's Ideas'
Analysis of Variance by Pre- and Post-Test

Source	df	Sum of Squares	Mean Squares	F-Ratio	p
Between Groups	1	183.71	183.71	7.748	0.007
Within Groups	68	1612.34	23.71		
Total	69	1796.05			

Mean duration per Conference:
Pre-Test 2.45 seconds; Post-Test 5.69 seconds

TABLE 5

STACS Category 3:
Duration of 'Supervisor Solicits Information'
Analysis of Variance by Pre- and Post-Test

Source	df	Sum of Squares	Mean Squares	F-Ratio	p
Between Groups	1	41.66	41.66	1.232	0.271
Within Groups	68	2298.52	33.80		
Total	69	2340.18			

Mean duration per Conference:
Pre-Test 4.26 seconds; Post-Test 2.72 seconds

TABLE 6

STACS Category 13:
Duration of 'Teacher Solicits Information'
Analysis of Variance by Pre- and Post-Test

Source	df	Sum of Squares	Mean Squares	F-Ratio	p
Between Groups	1	287.25	287.25	5.214	0.026
Within Groups	68	3746.56	55.10		
Total	69	4033.81			

Mean duration per Conference:
Pre-Test 0.25 seconds; Post-Test 4.30 seconds

TABLE 7

STACS Category 4:
Duration of 'Supervisor Solicits Opinion or Suggestions'
Analysis of Variance by Pre- and Post-Test

Source	df	Sum of Squares	Mean Squares	F-Ratio	p
Between Groups	1	1699.37	1699.37	7.785	0.007
Within Groups	68	14844.08	218.30		
Total	69	16543.45			

Mean duration per Conference:
Pre-Test 9.16 seconds; Post-Test 19.01 seconds

TABLE 8

STACS Category 14:
Duration of 'Teacher Solicits Opinion or Suggestions'
Analysis of Variance by Pre- and Post-Tests

Source	df	Sum of Squares	Mean Squares	F-Ratio	p
Between Groups	1	19.03	19.03	0.818	0.369
Within Groups	68	1581.50	23.26		
Total	69	1600.53			

Mean duration per Conference:
Pre-Test 0.92 seconds; Post-Test 1.97 seconds

TABLE 9

STACS Category 5:
Duration of 'Supervisor Provides Solicited Information'
Analysis of Variance by Pre- and Post-Test

Source	df	Sum of Squares	Mean Squares	F-Ratio	p
Between Groups	1	356500.31	356500.31	47.535	0.000
Within Groups	68	509980.48	7499.71		
Total	69	866480.79			

Mean duration per Conference:
Pre-Test 0.26 seconds; Post-Test 142.99 seconds

TABLE 10

STACS Category 15:
Duration of 'Teacher Provides Solicited Information'
Analysis of Variance by Pre- and Post-Test

Source	df	Sum of Squares	Mean Squares	F-Ratio	p
Between Groups	1	150.68	150.68	0.214	0.645
Within Groups	68	47886.39	704.21		
Total	69	48037.07			

Mean duration per Conference:
Pre-Test 15.67 seconds; Post-Test 12.74 seconds

TABLE 11

STACS Category 6:
Duration of 'Supervisor Provides Solicited Opinion or Suggestion'
Analysis of Variance by Pre- and Post-Test

Source	df	Sum of Squares	Mean Squares	F-Ratio	p
Between Groups	1	90.97	90.97	2.150	0.147
Within Groups	68	2877.05	42.31		
Total	69	2968.02			

Mean duration per Conference:
Pre-Test 0.84 seconds; Post-Test 3.12 seconds

TABLE 12

STACS Category 16:
Duration of 'Teacher Provides Solicited Opinion Suggestion'
Analysis of Variance by Pre- and Post-Test

Source	df	Sum of Squares	Mean Squares	F-Ratio	p
Between Groups	1	67630.08	67630.08	17.127	0.000
Within Groups	68	268518.77	3948.80		
Total	69	336148.85			

Mean duration per Conference:
Pre-Test 33.21 seconds; Post-Test 95.37 seconds

TABLE 13

STACS Category 7:
Duration of 'Supervisor Provides Unsolicited Information'
Analysis of Variance by Pre- and Post-Test

Source	df	Sum of Squares	Mean Squares	F-Ratio	p
Between Groups	1	16181.92	16181.92	21.089	0.000
Within Groups	68	52176.60	767.30		
Total	69	68358.53			

Mean duration per Conference:
Pre-Test 48.44 seconds; Post-Test 18.03 seconds

TABLE 14

STACS Category 17:
Duration of 'Teacher Provides Unsolicited Information'
Analysis of Variance by Pre- and Post-Test

Source	df	Sum of Squares	Mean Squares	F-Ratio	p
Between Groups	1	47.56	47.56	0.051	0.821
Within Groups	68	62942.68	925.63		
Total	69	62990.24			

Mean duration per Conference:
Pre-Test 23.55 seconds; Post-Test 25.20 seconds

TABLE 15

STACS Category 8:
Duration of 'Supervisor Provides Unsolicited Opinion or Suggestions'
Analysis of Variance by Pre- and Post-Test

Source	df	Sum of Squares	Mean Squares	F-Ratio	p
Between Groups	1	60964.70	60964.70	24.189	0.000
Within Groups	68	171385.17	2520.37		
Total	69	232349.88			

Mean duration per Conference:
Pre-Test 85.45 seconds; Post-Test 26.42 seconds

TABLE 16

STACS Category 18:
Duration of 'Teacher Provides Unsolicited Opinion or Suggestions'
Analysis of Variance by Pre- and Post-Test

Source	df	Sum of Squares	Mean Squares	F-Ratio	p
Between Groups	1	31244.93	31244.93	11.015	0.002
Within Groups	68	192891.30	2836.64		
Total	69	224136.23			

Mean duration per Conference:
Pre-Test 22.42 seconds; Post Test 64.67 seconds

TABLE 17

STACS Category 9:
Duration of 'Supervisor Non-Supportive Behavior'
Analysis of Variance by Pre- and Post-Test

Source	df	Sum of Squares	Mean Squares	F-Ratio	p
Between Groups	1	349.89	349.89	9.119	0.004
Within Groups	68	2609.13	38.37		
Total	69	2959.02			

Mean duration per Conference:
Pre-Test 4.47 seconds; Post-Test 0.00 seconds

TABLE 18

STACS CATEGORY 19:
Duration of 'Teacher Non-Supportive Behavior'
Analysis of Variance by Pre- and Post-Test

Source	df	Sum of Squares	Mean Squares	F-Ratio	p
Between Groups	1	10.41	10.41	3.093	0.083
Within Groups	68	228.93	3.37		
Total	69	239.34			

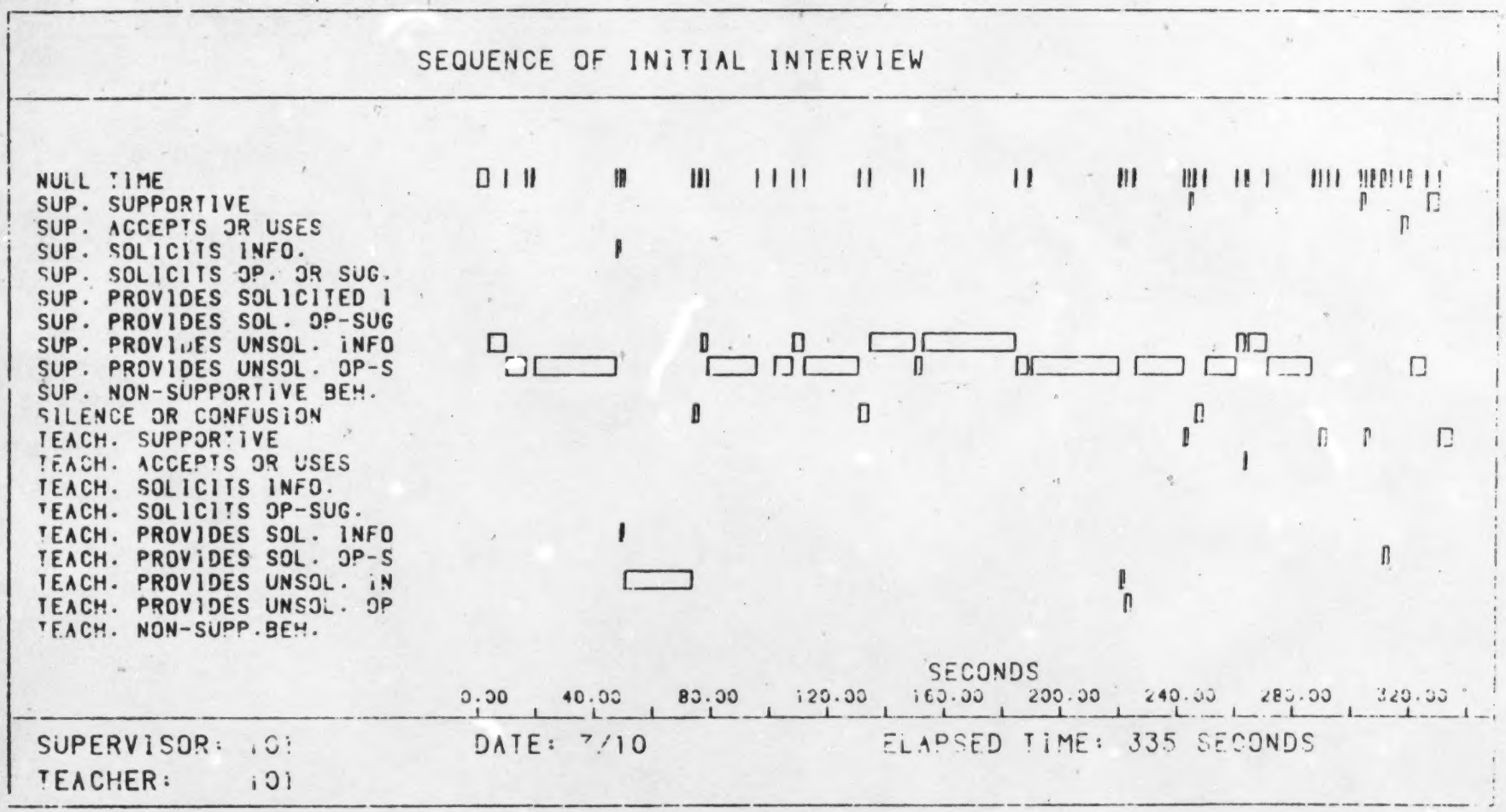
Mean duration per Conference:
Pre-test 0.77 seconds; Post-Test 0.00 seconds

TABLE 19

A Comparison of Total Time Utilized in Supervisory Conferences Analysis of Variance by Pre- and Post-Test

Source	df	Sum of Squares	Mean Squares	F-Ratio	p
Between Groups	1	1123626.41	1123626.41	22.631	0.000
Within Groups	68	3376199.36	49649.99		
Total	69	4499825.80			

Mean duration per Conference:
Pre-Test 350.80 seconds; Post-Test 604.19 seconds


SEQUENCE OF INITIAL INTERVIEW
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SUP. PROVIDES UNSOL. OP-S
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SILENCE OR CONFUSION
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SECONDS
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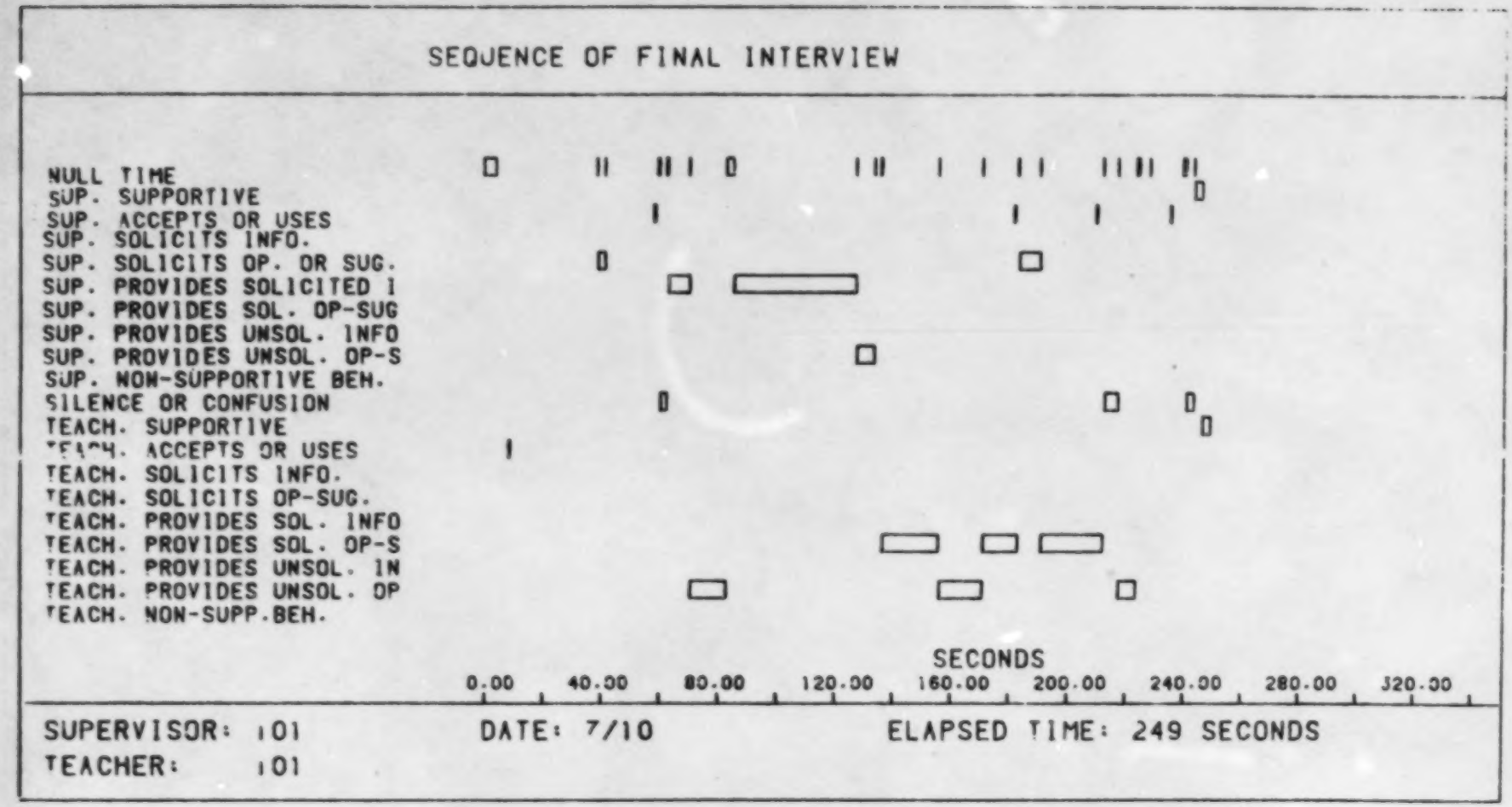
SUPERVISOR: 101
TEACHER: 101
DATE: 7/10
ELAPSED TIME: 335 SECONDS

FIGURE 1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SILENCE OR CONFUSION
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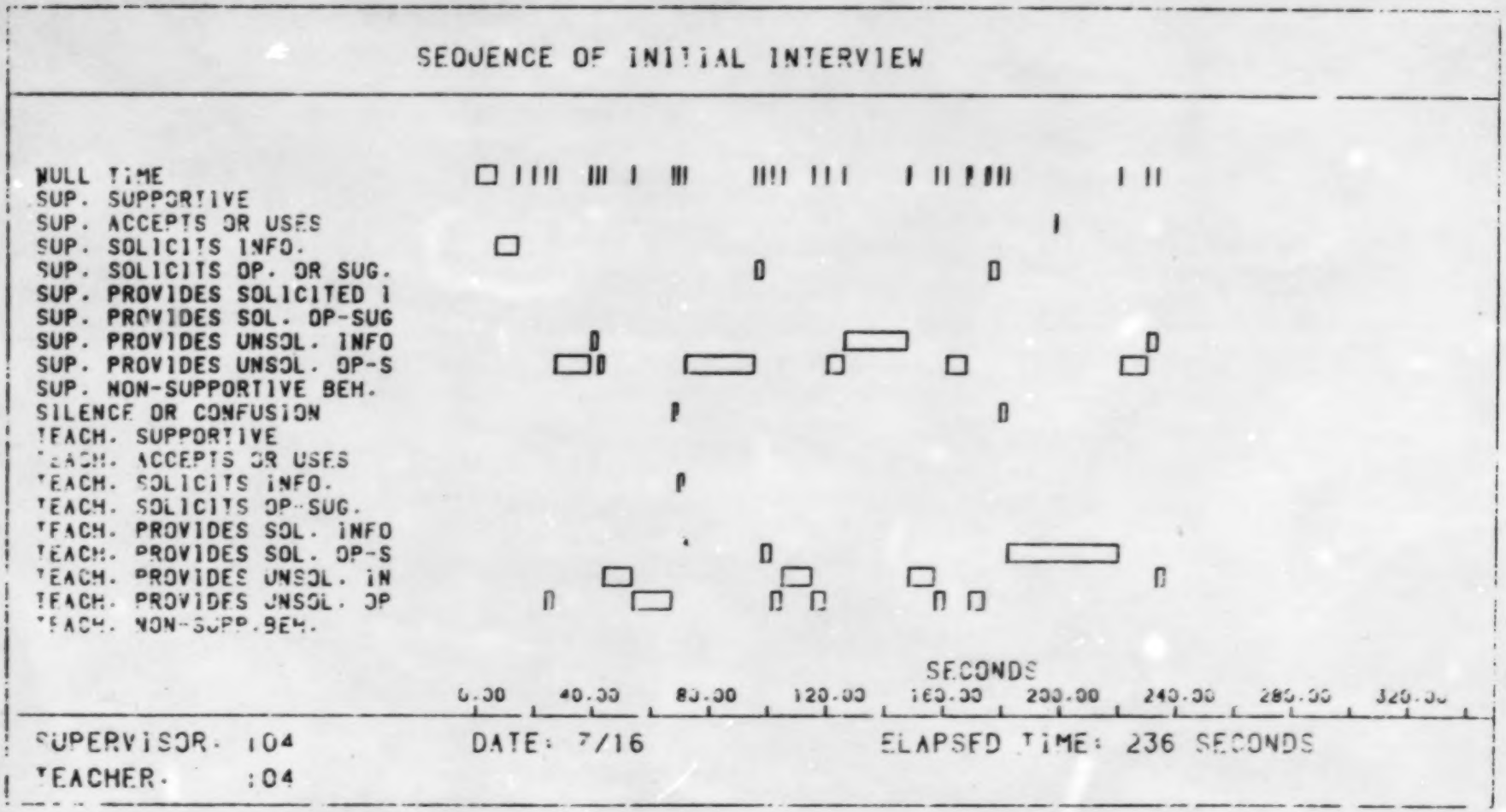
SUPERVISOR: 101
TEACHER: 101
DATE: 7/10
ELAPSED TIME: 249 SECONDS

FIGURE 2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SECONDS
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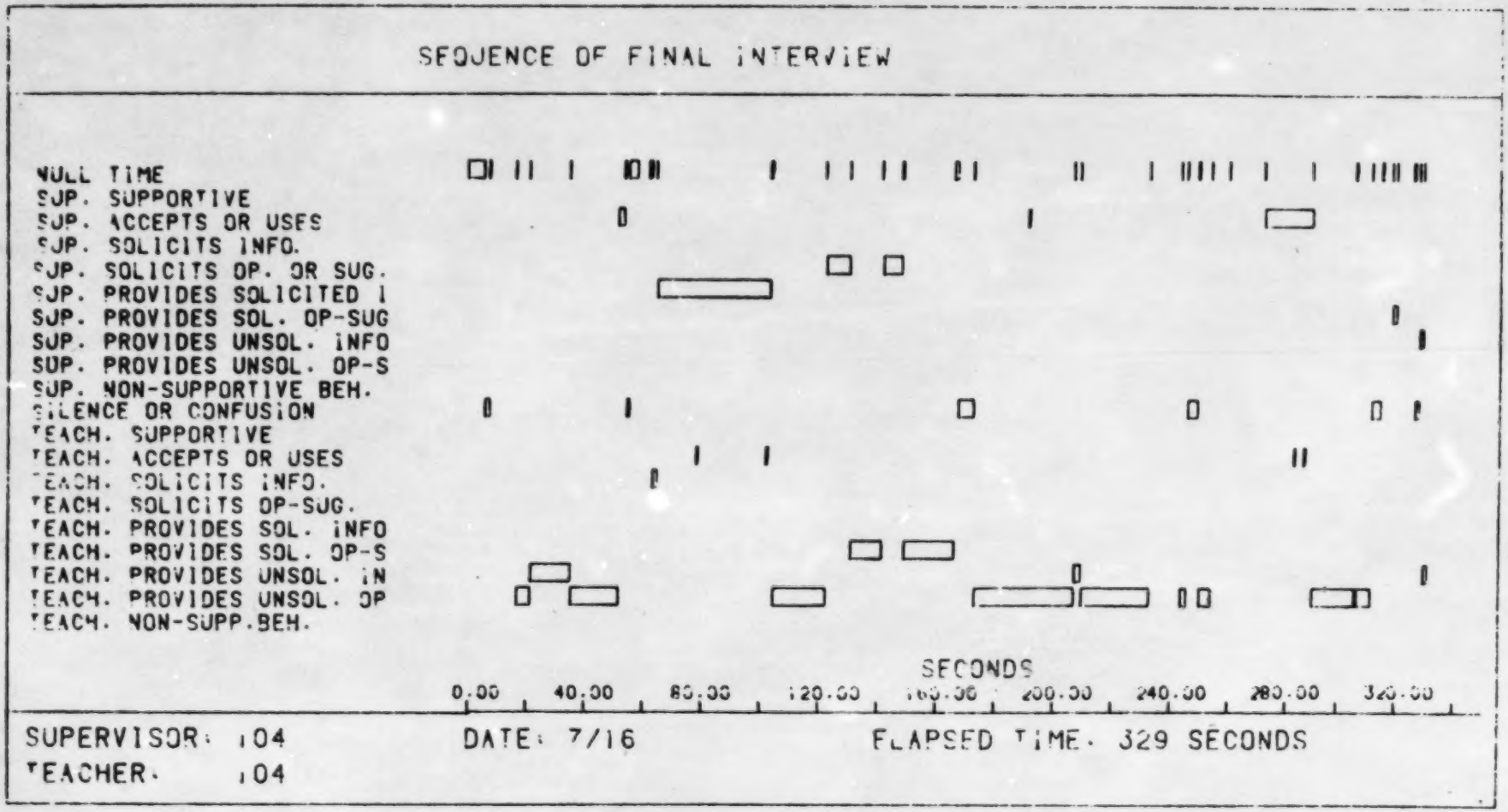
280.00
320.00
SUPERVISOR: 04
TEACHER: 04
DATE: 7/16
ELAPSED TIME: 236 SECONDS

FIGURE 3


SEQUENCE OF FINAL INTERVIEW
NULL TIME
SUP. SUPPORTIVE
SUP. ACCEPTS OR USES
SUP. SOLICITS INFO.
SUP. SOLICITS OP. OR SUG.
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SUP. PROVIDES UNSOL. INFO
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200.00
240.00
280.00
320.00
SUPERVISOR: 104
TEACHER: 104
DATE: 7/16
ELAPSED TIME: 329 SECONDS

FIGURE 4

DISCUSSION

The major purpose of this study was to examine changes that occur in supervisory behavior as a result of training in Clinical Supervision. Specific objectives were to examine how supervisory behavior changed in each category of STACS and to see whether there was an over-all increase or decrease in each behavior. Another objective was to compare the changes in supervisory behavior with the changes in teacher behavior in an attempt to draw some inferences about how the one affected the other.

In the light of the findings of this study it would seem reasonably safe to conclude that training in Clinical Supervision does result in some dramatic changes in supervisory behavior during the supervisory conference. The fact that six out of nine categories identified by the STACS instrument showed changes which, according to analysis of variance, were beyond the .05 level of significance, permits one to accept that there is a high probability that the changes were the result of the treatment. It is also significant that the changes were all in the direction one would have anticipated, with the possible exception of Category 1: 'Supervisor Supportive Behavior' which shows a slight decrease which is not statistically significant.

These changes in behavior are understandable when one considers that, in the pre-training conferences, supervisors tended to provide much more unsolicited information and opinion and were also more critical of the teacher (non-supportive behavior). This led to the use of a 'sandwich technique' in the conference strategy in which the supervisor would find something complimentary to say in order to soften the blow for the critical comments which followed (comments which were in the area of unsolicited opinion).

In the post-training conferences, because there was much greater attention paid to providing feedback to the teachers (as a result of a pre-observation conference) in the form of objective data and then soliciting the teachers' opinions relative to the feedback, the supervisors had little need to flatter the teacher. Nor were the supervisors critical of the teachers (non-supportive behavior disappeared from the post-training conferences). Instead there was much more providing of information which had been solicited by the teacher and much less providing of unsolicited supervisor opinion. The reader should note that in the pre-training or baseline conferences supervisors provided hardly any solicited information (average duration of .26 seconds) but did provide much unsolicted information

(average duration of 48.4 seconds). Also note that in the baseline conferences the supervisors provided much more unsolicited opinion (average duration of 85 seconds). Thus supervisors were dealing with concerns that they felt were important to a much greater extent than they were dealing with concerns the teachers felt a need to address.

In post-training conferences behavior shifted to providing much more solicited information (an increase in duration from .26 seconds to approximately 2.38 minutes). This is explainable because of the use of a pre-observation conference in Clinical Supervision in which teacher and supervisor together discuss and agree on the kinds of concerns that should be observed during the observation period. Thus, when the supervisor provides feedback he is providing feedback in the form of information sought by the teacher and the teacher then can respond to the feedback and make decisions relative to possible changes in his own behavior.

It is interesting to note the changes in teacher behavior that accompany the changes in supervisor behavior. Four of the nine categories showed changes that are statistically significant. Teachers accepted and used the ideas presented by supervisors more than they did in the pre-training conferences. This behavior more than doubled

in average duration of time. There was a much greater tendency on the part of teachers to solicit information from supervisors during the post-training conferences rather than be passive recipients of the information and opinion presented by supervisors.

Teachers provided much more solicited opinion or suggestions in response to questions posed by supervisors (an increase on the average from 33 seconds to 95 seconds). This is understandable in the light of the increase in supervisor behavior of soliciting such opinion from teachers. What should be noted, however, is the greater tendency for teachers to respond to such questions not only by providing solicited opinions, but also by exhibiting a much greater willingness to provide opinion or suggestions about what the feedback means to them and to offer suggestions as to how to improve their teaching performance.[3] For a graphic illustration of changes between initial and final conferences see Figures 1 - 4.

It is interesting to note along with the disappearance of supervisor non-supportive behavior, a similar

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[3] This observation is not drawn from the data presented in this study but from the researcher's knowledge of the content of the videotapes used in the research project.

disappearance of teacher non-supportive behavior. One might infer that when supervisors are non-supportive teachers react in kind, as evidenced by some non-supportive teacher behavior in baseline conferences. Although these changes are not statistically significant they are interesting.

Another interesting finding is that, after training in Clinical Supervision, the supervisory conference increases in length. The increase is on the average a two-fold one, increasing from 5.8 minutes on the average in the pre-training conference to 10 minutes in the post-training conference. This might be explained by the fact that in the baseline conferences supervisors felt somewhat uncomfortable in not knowing what they should say with respect to the lessons they had observed. Also, in many instances the supervisors had little data with which to work. Without training, supervisors are unskilled in collecting data or in conferencing technique. After training supervisors felt more comfortable knowing, as a result of a pre-observation conference, what data to collect. They were more skilled in collecting objective data and had practised the skills of providing feedback in ways which were non-threatening.[4]

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[4] These inferences are drawn in part from discussion with the participants in the workshops when they were in the training program.

In terms of supervisory styles conceptualized by Blumberg and Amidon as outlined earlier in this report, it would seem to follow from the findings of this study that supervisors shifted from High Direct behavior (whether combined with High or Low Indirect behavior) to High Indirect, Low Direct behavior. A lot of behavior in post-training conferences included an emphasis on asking questions, listening and reflecting back the teacher's ideas and feelings. If one accepts the conclusions of Blumberg and Amidon (1965) that:

> (1) high indirect supervisory behavior, whether combined with high direct behavior or not, is related to evaluations of greater conference productivity and,
> (2) high indirect combined with high direct supervisory behavior is related to learning about one's self both as a teacher and as a person (pp.2,3),

then one would be led to the conclusion that the post-training behavior of supervisors in this study would be related to greater conference productivity.

Suggestions for Further Research

The results of this study speak to the changes that occur in supervisory behavior as a result of training in Clinical Supervision. The changes are measured at the conclusion of the workshop activity which extends over the

duration of approximately 14 to 16 weeks. Just how permanent is this change in behavior? Further study should attempt to assess the permanence of such behavior change. Do supervisors so trained continue to display the kinds of supervisory behavior which was evident at the conclusion of the workshop or do they revert to earlier styles of supervisory behavior?

The assumption is made that the changes in supervisory behavior lead to greater conference productivity. Further study should be undertaken to ascertain whether the teachers so supervised perceive such conferences as more productive than conferences conducted by untrained supervisors.

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APPENDIX A

Supervisor-Teacher Analogous Categories System (STACS)

Supervisor-Teacher Analogous Categories System (STACS)

Supervisor Behavior	Description of Behavior	Teacher Behavior
1	Supportive Behavior	11
2	Accepts or Uses the Other's Ideas	12
3	Solicits Information	13
4	Solicits Opinion or Suggestion	14
5	Provides Solicited Information	15
6	Provides Solicited Opinion or Suggestion	16
7	Provides Unsolicited Information	17
8	Provides Unsolicited Opinion or Suggestion	18
9	Non-supportive Behavior	19
10	Silence or Confusion	10

Supervisor-Teacher Analogous Categories System (STACS)*

Supervisor Behavior	Description of Behavior	Teacher Behavior
1	Supportive Behavior. All behaviour which tends to open up and build a warm, collegial climate between supervisor and teacher. Behavior that releases tension is in this category. Praise and encouragement is included here as is behavior which conveys a recognition and acceptance of the feelings of the other person.	11
2	Accepts or uses the other's ideas. All behavior which clarifies, builds on or develops ideas or suggestions of the other. Teacher behavior which shows acceptance of supervisor talk, and vice versa, is included. Paraphrasing of the other's talk is also included.	12
3	Solicits information. Behavior that seeks clarification about a procedure or situation relative to content or physical setting. Questions which seek clarification or what the other is asking would also be included. Information sought is factual in nature, known to the one but not the other. It is not concerned with opinion or value judgments.	13
4	Solicits opinion or suggestions. Behavior which is intended to have the other person analyze or evaluate something that has occurred or may occur. It includes supervisor behavior which asks the teacher to think about alternative strategies or methods without necessarily implying criticism of what was done or is being planned. The intention here should be to open up new vistas and stimulate creativity on the part of the teacher. This category would also include genuine attempts on the part of the teacher to seek suggestions or opinions, provided that this is not done merely to comply in a dependent manner to win approval of the supervisor. (Compliant behavior on the part of the teacher is coded as defensive behavior under Category 19, as is rationalization.)	14

(cont.) Supervisor-Teacher Analogous Categories System (STACS)

Supervisor Behavior	Description of Behavior	Teacher Behavior
5	Provides solicited information. This behavior is the opposite of Category 3/13, in that information is provided rather than solicited. It can be given either as a result of prior agreement to gather the information or as a response to a direct request for the information by the other person. Information given is factual and objective. Behavior description is used. The information is intended as feedback or is provided for orientation or for summary. Value judgments should not be included here.	15
6	Provides solicited opinion or suggestions. As in Category 5/15, opinions or suggestions are provided as a result of a direct request on the part of the other person. This is primarily task-oriented rather than process-oriented behavior. Value judgments would be included here. Restricted teacher response to a supervisor question, or vice versa, would be coded in this category as a 16 or 6 depending on who was giving the opinion.	16
7	Provides unsolicited information. The difference between this category and Category 5/15 is that the information is provided as the result of a unilateral decision to do so on the part of the person providing the information. Typically there would be no evidence of a request for the information on the part of the other person either in a pre-observation conference or earlier in the post-observation conference.	17
8	Provides unsolicited opinion or suggestions. This is the opposite of Category 6/16 in that the opinions or suggestions have not been solicited. Supervisor opinion or suggestion when volunteered should be coded here (8) as should unrestricted teacher comment (18) whether initiated by the teacher or in response to an open-ended supervisor question. Value judgments will be included here, as was the case in Category 6/16.	18

(cont.) Supervisor-Teacher Analogous Categories System (STACS)

Supervisor Behavior	Description of Behavior	Teacher Behavior
9	Non-supportive behavior. This is the opposite of Category 1/11. It includes all behavior which tends to "cool" or formalize the climate between supervisor and teacher. Negative value judgments are included here as are questions which imply crass criticism of what was done or said by the other. Any behavior which tends to create undue tension is included (e.g. exercising authority, brashly rejecting or criticizing the other's judgment or opinion, or any form of aggressive or defensive reaction to the other person). Teacher behavior which demonstrates compliance or rationalization is defined as defensive behavior (19). Supervisor behavior which shows tactless non-acceptance of the teacher's ideas and/or behavior which tends to push the supervisor's ideas without heeding teacher concerns would be coded as 9.	19
10	Silence or confusion. This category is used for pauses, periods of silence, or when both supervisor and teacher are talking at the same time so that it is impossible to categorize the behavior. If silence seems to be the result of behavior which tends to produce tension or defensiveness, then Category 9 or 19 should be used, depending at whom the original behavior was directed.	10

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